No. 80-2023

Office-Supreme Court, U.S.
FILED
MAY 18 1981
ALEXANDER L. STEVAS,
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In the

SUPREME COURT OF THE UNITED STATES

_____ Term 1981

WILLIAM D.HURST,

Petitioner,

v.

HUGHES TOOL COMPANY,

Respondent.

ON WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

PETITION FOR CERTIORARI

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QUESTIONS PRESENTED FOR REVIEW

1. Should the federal court of appeals in this diversity action be compelled by this Court to apply strictly the law of trade secrets as established by the highest state court in the forum involved because of a need for consistent application of state trade secret law as a necessary and important supplement and corrollary to U.S. patent law protection?

2. Did the federal court of appeals in this diversity action properly apply the law of trade secrets as set down by the Texas Supreme Court in its review of the directed verdict granted by the trial court?

OPINION BELOW

The Opinion of the Court of Appeals in this action was rendered January 22, 1981. The Court's Opinion is reported at 634 F2d 895 (1981). A complete copy of the Opinion of the Court of Appeals delivered upon the rendering of the Judgment which is sought to be reviewed, is contained in the Appendix.

STATEMENT OF JURISDICTION

The Judgment of the Court of Appeals was entered on January 22, 1981. The denial of a timely Petition for Rehearing was entered on February 20, 1981. This Petition for Certiorari is filed within ninety (90) days of that date. Jurisdiction of this Court is invoked under 28 U.S.C.A. §1254(1).

STATEMENT OF THE CASE

In August 1969, the Petitioner, William Hurst, became interested in the concept of applying boron coatings to metal after reading of a patented General Electric

Company process ("Metalliding"). Hurst had no particular use, process or product in mind after reading of the process, so he launched a search to determine if he could find some useful application.

After substantial investigation, Hurst ultimately conceived the idea of using a boron coating on the bearings and cutting surfaces in oil tool drill bits, because of the substantially longer life that he believed could be achieved.

Hurst purchased a 7 7/8" steel tooth oil well drill bit, had it dismantled to remove all three drill bit cones and sent those cones for boronization in November of 1969. The "cones" are the rotating members of a drill bit; there are three on each bit. Hurst instructed the boronizing company as to how the boronization was to be accomplished, including instructions as to the desired depth of boronization on each of the three cones.

After receiving the treated drill cones, Hurst had the drill bits reassembled with the treated cones, and he took the drill bit to Kathol Petroleum Company ("Kathol") in Wichita, Kansas, because he wanted to actually drill a well with the treated bit to test its performance. The tests conducted and the results generated indicated to Hurst that the boronizing treatment applied to the cones had performed well.

After these test bits were pulled from the well, Hurst had them disassembled, sectioned and analyzed. From these tests, Hurst learned how much boron remained, what wear had been experienced on the unboronized areas, how deep the boronizing treatment had gone, the hardness of the treatment at and below the surface, and the depth of carburization.

After reviewing the test results, Hurst was able to determine which of the earlier boron treatments performed best by checking

the amount of wear and fracture, and that both the cutting surface boronization and the boronization of the bearings were advantageous.

Hurst purchased a second drill bit in February, 1970, had the cones removed, and sent those cones for boronization. He specified changes in his directions on the second set of test boronizing, incorporating the information learned from the first set of cones into his instructions on how to treat the second set.

Hurst had other boronizing work done during this period, including small test strips of different materials and metals, which helped him ultimately in his work on drill cones. They were done as a part of his overall boronizing experimentation so that he could learn additional information about boronization to later be applied to his treatment of drill bits and his testing and variations on them.

After the second set of boronized cones was returned, Hurst had them reassembled into a bit and drilled in another test well with Kathol. The results from these subsequent tests indicated that the boron-treated drill bit was superior in performance to non-treated, standard bits.

After the conclusion of these second tests, Hurst had the cones removed from the bit and sectioned and tested as with the earlier bit. The test results indicated that the boronization on the cutting surface of the cones was favorably affecting their cutting rate and that the bearing surfaces also were being favorable affected. The Court of Appeals found that all of Hurst's experiments were thorough and workmanlike. (Opinion, p. 2884).

After the conclusion of his testing and evaluation of the second set of drill cones, Hurst bought a third drill bit and had it disassembled and boronized. He had

determined by that time, from the earlier laboratory and field testing, the details of the treatment he wanted applied to this third set of cones.

Hurst then took his treated drill cones, traveled to Houston, Texas, and on September 16, 1970, went to the offices of Hughes Tool Company. He asked to speak with someone with the company and was introduced to a Mr. Wisler. In his initial conversation, Hurst tried to be as brief as possible. He gave Wisler a quick rundown on the treated cone, have him a few hardness figures, and asked if Hughes would be interested in testing it. The man indicated that they would. Hurst told them that he had developed a cone which could "vastly improve" the life of Hughes Tool Company drill bits. He gave the treated cone to the man, who indicated that the company would run tests on it to see if what he claimed was true.

Hurst then had numerous telephone conversations with representatives of Hughes beginning the next day after leaving Houston, and in each of these conversations they had questions for Hurst. There were questions about the density of the boron, carburization, depths of boronization, length of time required, hardness levels on the surface, and hardness levels in the substrata, and results of the testing Hurst had done on his boronized cones. They also discussed the cutting rate experiences Hurst had experienced in drilling the cones in the well with Kathol. The Hughes representative told Hurst that they were "interested" in his idea, but they "wanted more information", and would discuss at a later point the possibility of making some arrangement with him.

During one of the conversations at the Hughes Tool offices, Hurst asked them if they were using boron coatings in their

products, because he was not interested in trying to convince them to do what they were already doing. They told him that they were not.

Hurst made a second trip to Houston to meet by appointment with Hughes near the end of 1970. Hurst took all of the information and hardware he had generated from his earlier tests, including the drilling logs, the reports from Kathol, the laboratory test results and summaries and his personal notes on the matter. The Hughes representative looked at all the information provided by Hurst and told him they were "still interested", but "still testing", and asked Hurst if they could keep the treated drill cone. Hurst knew that the company had done a fair amount of testing by the time of this second personal meeting, because they were asking detailed, sophisticated questions which they would not have known to ask without some extensive testing

on their own. During this meeting, the Hughes representatives asked Hurst what he "proposed". Hurst said he was interested in a "royalty".

Hurst was not proposing to Hughes that they adopt the metalliding procedure to boronize their drill bits wear surfaces. Rather, his proposed and proven idea was to boronize the bearing surfaces and cutting surfaces of the drill bit cones by whatever method they chose to use. Boronization of cutting teeth and bearing surfaces and the proof of its effectiveness, not a method of boronization, had been the subject of all Hurst's tests, reports, evaluations and conclusions.

At the conclusion of the second meeting, Hurst explained that the information then provided was all that he had, and an agreement was made that Hughes was to call him if the company was interested in using his idea. Hurst never heard from them again.

From the time he first began his investigation of boronization through the point when he finally abandoned any hope that Hughes Tool was going to pursue his idea, Hurst spent approximately a year and a half of his time and $15,000.00 to $20,000.00 trying to develop his idea.

As of the date of Hurst's first contact, Hughes Tool Company had never manufactured any drill bits in which any of the wear surfaces had been boronized, and it had no plans to manufacture or sell drill bits with boronized wear surfaces. In fact, as of that date, Hughes had never performed a single experiment testing the effectiveness or advisability of boronizing any wear surfaces in their drill bit. Hughes had neither manufactured, sold, experimented, planned nor even considered the possibility of utilizing boron treatment on the cutting surfaces of their bits prior to Hurst's submitted trade secret and idea. In the

experience and association of the Hughes witnesses with the oil tool manufacturing industry, none were aware of any company that was involved in producing oil field equipment using such boron coatings on wear surfaces prior to September, 1970. It was not generally known within the industry by September of 1970 that boron coatings on wear surfaces would be beneficial to drilling bits.

The concept of using boron coatings in various parts of the Hughes drill bits had been superficially considered periodically by the company at least as far back as 1968. However, although various individuals and entities made submissions and proposals concerning the applicability of boron coatings, none were able to offer evidence or proof that such coatings would work on drill bit surfaces.

A research project for the investigation of various metallurgical combinations

in the bearing system of the Hughes drill bits had been initiated in March of 1970 by Stanley Scales, a staff engineer with the company (the "Scales Project"). In this project, Scales had arranged for the investigation and evaluation of more than 14 different metallurgical treatments, including boron, but there had been no emphasis on the boron application as opposed to the other prospective alternatives, and Scales expected no superior performance from such. Due to difficulties in obtaining boronized specimens, the company did not even receive the boron treated samples until September 28, 1970, and the first test conducted on them was not concluded until November 11, 1970, more than thirty days after the initial testing on the Hurst specimen was completed.

The testing on the Hurst drill cone specimen began on the day of Hurst's first visit to Hughes and continued for over four months, with the final project summary dated

January 19, 1971. The results of the testing were summarized in a twenty-three-page report. The closing memo on Hurst's file concluded, among other things,

> "The results of this testing has indicated that boronizing may be a way of improving the life and performance of milled tooth cones."

In testing and evaluating the Hurst drill cones, the company spent a total of over 1,100 man-hours and $11,000.00. They ran every conceivable test on the specimen and the reports and records generated as a result thereof all made favorable findings, and suggested additional follow-up testing. Yet, Hughes never contacted nor attempted to contact Hurst to apprise him of the results of this testing, although the possibility of doing so was discussed between the company management and its attorneys.

The results of the Hurst tests provided Hughes with encouragement to go forward with

the testing on the boronization.[1] After the conclusion of that testing they actively began investigation and experimentation with the concept of boronization of wear surfaces, culminating in their first patent disclosure on the concept of the use of boronization, September 1, 1971. The Court of Appeals found:

> "The results gleaned gave Hughes Tool encouragement to go forward with other boronizing testing, which led to several Hughes Company patents for boronizing bearing surfaces and cutting structures." (Opinion, p. 2886).

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1. In fact, the Hughes Tool research files indicate that at times, the Hurst successes were the only thing which gave them sufficient encouragement to go on with their testing program. For example, in a Hughes Tool Inter-Office Communication dated December 10, 1971 (Pl. Ex.93), they concluded in subsequent testing:

> "Based on the results of this test alone, boronizing cones is of no value. When the results of Project 46-42-02-01 (Hurst's tests) are considered, however, boronizing still shows some promise."

The Scales Project, initiated in March of 1970, was essentially dormant, at least as it related to the evaluation or testing of any boronized specimens, until the first test was concluded in November, 1970. This test demonstrated only certain anti-galling properties of the boronization. No hardness readings were obtained from the Scales Project specimen until at least March, 1971. Yet, Scales was already citing the hardness figures observed in the Hurst specimen to the Hughes Tool in-house attorney in December, 1970, and raising the possibility of patents based thereon.[2]

Hughes Tool Company had received three separate United States patents and at least

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2. In fact, Scales, the named inventor in the Hughes Tool boronization patents, commented on the "unexpected performance improvements" realized by the boronizing and on the possibility of patenting this "novel use of boronizing...on rock bit parts".

fourteen foreign patents as of the date of trial, involving the use of boronization in their drill bit products.

In the course of conducting research operations at Hughes, certain programs and sub-programs are established for investigation of general subject matters, and under those are created research projects. If one of these projects shows certain results or teaches certain items which the company thinks helpful in developing what they are investigating, the results and conclusions from it are incorporated into a subsequent project. Plaintiff's Exhibit 72 reflects the relationship between the findings and conclusions from various specifically identified Hughes projects, and demonstrates how the information learned from early projects is incorporated into subsequent ones, ultimately culminating in company patents. That exhibit demonstrates that the testing on the Hurst project, while not the only project

ultimately used by Hughes to develop their patents, was nevertheless an integral and important element in the development of the Hughes Tool use of boronization in its products. A copy of that exhibit is included in the Appendix.

In fact, the Court of Appeals found:

> "Regardless of its protestations to the contrary, it appears that Hughes Tool did 'use' Hurst's information in the sense that the work it did on Hurst's cone provided background information which led to at least one company patent." (Opinion, p. 2886).

Hughes Tool is now using boronization on the journal bearing pin of its bearing system in certain sizes and types of commercial drill bits. The use of these boronized surfaces gives an improved wear resistance, makes them more efficient, gives them protection against galling, causes them to perform superior to smooth, hard-metal alloys, gives them better friction-bearing properties, gives them an extended useful life, and accomplishes a manufacturing cost savings

for Hughes. The total sales of Hughes Tool projects using boron treatment of wear surfaces for the two-year period immediately preceding trial were over $27,500,000.00.

This action was initiated in the United States District Court for the Northern District of Texas, Dallas Division, on the 20th day of May, 1977. Jurisdiction of that court was grounded upon diversity of citizenship pursuant to 28 U.S.C.A. §1332.

REASONS FOR ALLOWANCE OF THE WRIT

Scientific and technological development and innovation in this country has undergone a steady and uninterrupted decline for the last decade. The economic, social and personal consequences are obvious and disturbing. Many factors have contributed, but one important element is the decline of the protection and incentive afforded the prospective inventor or innovator.

When a person sets out to solve a problem or build a better mousetrap, he

necessarily does so with his own self-interest in mind. The problem may be his own or one in which he has an individual interest, or he may simply be seeking the rewards to be realized from his successes. This "supply-side" incentive for inventors functions precisely in the same manner, for the same reasons and is equally necessary as the incentive for investment from supply-side economic policy. If reward is likely, the effort will be expended - if reward is questionable or insufficient, the effort is unlikely, or at least may be restricted.

A potential new inventor or problem-solver may expect to be faced with three possible results if a useful project or idea is produced:

(a) he may be awarded a patent - a government sanctioned exclusive right to make, use or sell his idea for a limited time period, in exchange for a full disclosure and

dedication of his knowledge to public use (35 U.S.C. ¶154);

(b) he may be entitled to keep, use or license his idea and innovation and treat such as a trade secret, unprotected by a legal, exclusive right or monopoly, but secure in its value to the inventor's business, so long as the secrecy and integrity of it has been maintained (see, for example, Hyde Corporation v. Huffines, 314 SW2d 763 (Tex.Sup. Ct., 1958); K & G Oil Tool v. G & G Fishing Tool, 314 SW2d 782 (Tex.Sup. Ct., 1958); or

(c) he may be relegated to the "law of the jungle as the standard of morality expected in our commercial transactions" (E.I. DuPont deNemours and Co. v. Christopher, 431 F2d 1012 (5th Circ.,1970) with no holds barred and his idea open

to theft, fraud, trick or any other device by which the unscrupulous would take it.

The United States Constitution provides that in the first situation, the public good is served by such exclusive patent monopolies where true invention is involved (Art. I, ¶ 8, cl. 8), but only where certain precise and exacting tests are met. (34 U.S.C. 103 ¶¶ 101-103). Obviously, there are many useful, innovative and valuable ideas which, although unpatentable, are clearly beneficial to the public and to the fields of endeavor to which they relate. A determination must then be made as to whether these will be controlled by some limited trade secret protection, or relegated to the catagory of every man for himself.

As detailed by this Court in Kewanee Oil Co. v. Bicron Corp., 94 S.Ct. 1879, 416 U.S. 470, 40 L.Ed.2d 315 (1974), the various states have by statute and decision provided for

varying forms and degrees of such trade secret protection. Although these differ on occasion in form and effect, and although the protection provided by individual states may evolve and change as the state courts feel appropriate, there is nevertheless a continuing, consistent and predictable body of trade secret law to which a prospective inventor can look in deciding whether to pay the price in time and resources in seeking new ideas and discoveries.

It is important that this be so. Patent law does not and cannot apply to and protect every useful and valuable idea conceived. Equally important, the business world cannot be relegated to a robber-baron morality. If new ideas, unpatentable, and yet highly valuable and useful, are to be encouraged, and if their creator is to be sufficiently protected and confident of their value upon creation, trade secret is an absolutely essential element in the

commercial law of this nation regarding protection of intellectual property.[3]

As this Court noted in Kewanee Oil, supra:

> "Trade secret law and patent law have co-existed in this country for over one hundred years. Each has its particular role to play and the operation of one does not take away from the need for the other. Trade secret law encourages the development and exploitation of those items of lesser or different invention than might be accorded protection under the patent laws, but which items still have an important part to play in the technological and scientific advancement of the Nation. Trade secret law produces the sharing of knowledge, and the efficient operation of industry; it permits the individual inventor to reap the rewards of his labor by contracting with a company large enough to develop and exploit it."

However, the existence of a predictable, consistent application of state-monitored

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3. "Trade secret law will encourage invention in areas where patent law does not reach, and will prompt the independent innovator to proceed with discovery and exploitation of his invention. Competition is fostered and the public is not deprived of the use of valuable, if not quite patentable, invention." Kewanee Oil Co. v. Bicron Corporation, supra, at page 1888.

trade secret law is more important still than described here.

If trade secret law, as determined and set down by the states, is not conscientiously and strictly applied and followed by federal courts enforcing it, or if those courts are allowed to expand or embellish the subject in a manner at odds with the highest state court's holding on such, much more damage is done than mere inconsistency between the state and federal decisions or the harm to the individual parties there involved.

If trade secret protection becomes unpredictable and subject to change as a result of modifications and alterations affected by federal courts in diversity actions, the policy of patent protection afforded by the Constitution and the general encouragement of innovative and progressive invention upon which this country has advanced and prospered, will be undermined.

If trade secret protection is questionable, inventors will tend to submit <u>all</u> ideas

without discrimination, to the patent office, both because they have nothing to lose by so doing (and no possible protection if they do not), and because of any offensive advantage they may obtain by claiming a patent application "pending" (and this "pending" status would extend in time far beyond that currently experienced as a result of the mass of new applications), even when the inventor was confident no new patent would be granted.[4]

Further, and more important, the incentive and protection being lost (or at least so severely questioned as to make the risk

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4. "There can be no public interest in stimulating developers of such (unpatentable) knowhow to flood an overburdened Patent Office with applications (for) what they do not consider patentable." Painton & Co. v. Bourns, Inc., 442 F2d 216 (2nd Cir. 1971), cited by this Court in Kewanee Oil Co. v. Bicron Corporation, supra, at page 1888.

of unrewarded invention unappealing) the flow of new and valuable, but unpatentable (or questionably patentable) ideas could be expected to slow dramatically.

The Court of Appeals in this action, while correctly stating that the law of trade secret to be applied was the law of the Restatement, Section 757, as recognized by the Texas Supreme Court, must have felt the Restatement too general in its condemnation of trade secret misappropriation by "improper means" (although this standard has been uniformly, consistently and broadly approved and followed by the Texas Courts). The Court of Appeals pointed out that an earlier action before it, E.I. DuPont deNemours and Co., Inc. v. Christopher, supra, had involved the improper discovery of a trade secret by "stealthy" means, and it therefore held that since the means used by Hughes Tool here did not employ "stealth", they could not be held to be improper.

Although there can be a strong factual case made for denominating Hughes Tool's actions as "stealthy", at least in part (the other part consisted of open, outright misrepresentations and fraud), such a showing is and should be unnecessary.

No decision of any Texas Court and certainly no part of the Restatement, or any interpretation or decision relating to it, has ever required that the "improper means" involve stealth. In fact, the Restatement concludes in its comments on this element:

> "A complete catalog of 'improper means' is not possible. In general, they are means which fall below the generally accepted standards of commercial morality and reasonable conduct."

Assuming that Hughes Tool's actions complained of here were not sufficiently "stealthy" to alarm the Court of Appeals' sensibilities, they were certainly within

the bounds of prohibited behavior proscribed by the Restatement.[5]

The body of trade secret law as set down and developed by the state courts is a necessary, important and essential supplement to a meaningful and workable federal patent law policy. The federal courts, when applying state trade secret law, must apply such strictly and without embellishment or expansion if the entire body of the law of ideas, state and federal, is to function effectively.

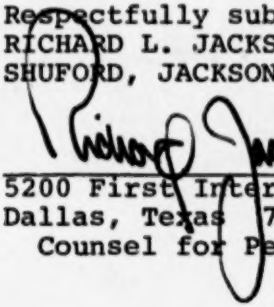
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5. Once the Court of Appeals determined that its self-imposed requirement of "stealth" had not been met, it proceeded to find, as a matter of law (in order to support the directed verdict) that Hurst's submission did not qualify as a trade secret (in total disregard of the Restatement definition of such), and that Hughes Tool did not use Hurst's information (except "in the sense that the work it did on Hurst's [treated drill bit] cone provided background information which led to at least one [Hughes Tool] patent."). A full discussion of the Court of Appeals' misapplication of Texas and Restatement law of trade secret in this case will be reserved for submission pending this Court's action on Hurst's Petition.

CONCLUSION

For the foregoing reasons, it is respectfully requested that this Petition for Writ of Certiorari be granted.

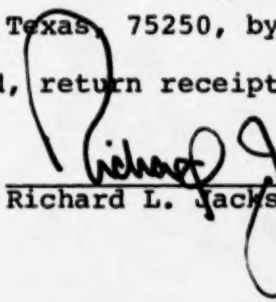
Respectfully submitted,
RICHARD L. JACKSON
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CERTIFICATE OF SERVICE

On the 15th day of May, 1981, three copies of this Petition for Certiorari were served upon Mr. Pat McGowan, attorney of record for the Respondent, at 1200 One Main Place, Dallas, Texas 75250, by first-class mail, certified, return receipt requested.



Richard L. Jackson

APPENDIX

William D. HURST,
Plaintiff-Appellant,

v.

HUGHES TOOL COMPANY,
Defendant-Appellee.

No. 78-3798.

United States Court of Appeals,
Fifth Circuit.

Jan. 22, 1981.

A diversity case presented problem in the law of trade secrets, disposed of by the United States District Court for the Northern District of Texas, at Dallas, Robert Madden Hill, J., on a motion for directed verdict in favor of the defendant. On appeal by the plaintiff, the Court of Appeals, Simpson, Circuit Judge, held that: (1) there was insufficient evidence of existence of a trade secret to go to the jury; (2) no evidence appeared on record that plaintiff took steps to protect himself or that defendant breached plaintiff's confidentiality or improperly discovered plaintiff's information; and (3) evidence that defendant did to some extent avail itself of information supplied by plaintiff failed to establish liability.

Affirmed.

1. Torts ⇐10(5)

Governing Texas law as to use of another's trade secrets is that adopted from Restatement of Torts, providing that one who discloses or uses another's trade secret, without privilege to do so, is liable to the other if he discovered the secret by improper means or if his disclosure or use constituted breach of confidence reposed in him by other in disclosing secret to him.

2. Federal Civil Procedure ⇐2126, 2608

Motions for directed verdict and judgment n. o. v. should not be decided by which side has better case, or granted only when there is complete absence of probative facts to support jury verdict, but, rather, there must be conflict in substantial evidence to create jury question.

3. Torts ⇐28

In diversity case, plaintiff's evidence to prove that his information was a trade secret deserving protection was insufficient to make case for jury on such issue.

4. Torts ⇐28

In diversity case, presenting problem in law of trade secrets, evidence including testimony that plaintiff did not even suggest to defendant that information plaintiff was giving to defendant was to be considered confidential failed to make case for jury on issue of confidential relationship.

5. Torts ⇐27

In diversity suit, evidence indicating only that defendant did to some extent avail itself of information supplied by plaintiff failed to establish liability on part of defendant for use of trade secret.

Appeal from the United States District Court for the Northern District of Texas.

Before GODBOLD, SIMPSON and THOMAS A. CLARK, Circuit Judges.

SIMPSON, Circuit Judge:

The instant diversity case presents a problem in the law of trade secrets,

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which was disposed of by the district court on a motion for directed verdict in favor of defendant. We affirm.

[1] The governing Texas law as to the use of another's trade secrets is well expressed in *E. I. duPont deNemours & Co., Inc. v. Christopher*, 431 F.2d 1012 (5th Cir. 1970) where we stated:

> The Texas Supreme Court specifically adopted the rule found in the Restatement of Torts which provides:
>
> "One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if
>
> (a) he discovered the secret by improper means, or
>
> (b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him * * *"

Restatement of Torts § 757 (1939). *Id.* at 1014. The issues in this trade secrets case follow from the well settled law; namely, was the trial court correct in directing a verdict against the plaintiff on the issues of: (1) the existence of a trade secret, (2) the breach of a confidential relationship or the improper discovery of a trade secret, (3) the use of a trade secret, and (4) the award of appropriate damages.

The Existence of a Trade Secret

To decide whether the trial court was correct in finding that there was insufficient evidence that Hurst's information was a trade secret deserving protection, two aspects of the problem must be examined: (1) what is the nature of the trade secret and (2) what are the facts surrounding the existence, discovery and use of the trade secret. First, Hurst alleges that the nature of the trade secret is, "that the use of boron coatings in wear surfaces and drill bits will make them more advantageous, accomplish certain benefits, along with the proof which he submitted to them that that concept in that trade secret is a viable, workable concept." Oral argument, statement of Mr. Jackson. *See* transcript at 110.

Second, the facts[1] surrounding the existence, discovery and use of the alleged trade secret are best approached chronologically. Hurst initially became interested in the concept of applying boron coatings to metal after reading an article in the August, 1969 issue of *Scientific American*. This magazine piece, written by Dr. Newell Cook, was on a metalliding process patented by General Electric. Transcript at 16–17. Dr. Cook, who was employed by General Electric's research and development department, was the inventor of the process discussed in the article. *Id.* at 19.

After reading this article, Hurst telephoned the author and asked him general questions concerning the process, its cost and its availability. *Id.* About this same time, Hurst, who was looking for an application for Dr. Cook's process, also had discussions with friends in the oil business, who complained of the high cost of removing and replacing worn drilling bits. Soon thereafter, Hurst conceived the idea of using a boron coating on the bearing and cutting surfaces of oil and gas well drill bits to give them longer life and to reduce fixed costs in the drilling business. *Id.* at 18–23. While doing this preliminary research, Hurst checked every source he could find and did not discover that boron had been applied to drill bits. *Id.* at 23.

1. The facts as we state them herein are extracted largely from Hurst's testimony and in all instances are stated in the light most favorable to Hurst.

After this initial research and development phase, Hurst bought a drill bit, had it dismantled and had the drill cones boronized inside and out as well as heat treated. *Id.* at 29–40. Hurst reassembled these drill bits and bought two untreated drill bits. He then supervised the digging of test drill sites, from which he generated comparison data showing that the baronized drill bits were superior to the untreated bits. *Id.* at 40–46. After the test sites were dug, Hurst had the treated bits cut apart and analyzed. *Id.* at 47–54. From the information gained, Hurst repeated and improved the process with other drill bits. *Id.* at 56. It appears from his testimony that Hurst spent between fifteen and twenty thousand dollars on this project. *Id.* at 110. It is also apparent that his experiments were thorough and workmanlike.

While Hurst was testing and prior to his initial visit to Hughes Tool Company on September 16, 1970, Hughes Tool had also been looking into the boronizing process. For some time prior to Hurst's visit, Hughes had considered boronizing some of its products and had initiated work on journal bearings. *Id.* at 292. Defendant's exhibits five and six are particularly interesting; they show that Hughes was asking as early as 1968 about metalliding and was receiving suggestions that boron would produce a hard surface on steel. Transcript at 297–304. Exhibit ten, another important exhibit, is a memo between personnel at Hughes indicating interest in having samples sent out to be boronized. Exhibit twenty is a report written by an employee of Hughes which referred to boronizing and said:

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Id. at 307–08.

[2, 3] The evidence summarized in the paragraphs above was found on directed verdict not to show the existence of a trade secret. The proper test for a directed verdict, which we think the trial court correctly applied, was stated in *Boeing v. Shipman*, 411 F.2d 365, 374–75 (5th Cir. 1969) (en banc):

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Considering this evidence and the record as a whole we affirm the trial court and find that there is no substantial conflict in the evidence sufficient to require sending this case to the jury on the question of the existence of a trade secret.

The Breach of a Confidential Relationship or the Improper Discovery of a Trade Secret

[4] Secondly, we find that there was not a breach of a confidential relationship by Hughes Tool nor was there an improper discovery of the Hurst information. On September 16, 1970, without an appointment, Hurst arrived at Hughes Tool Company with one of his cones and told the receptionist that he would like someone to look at it. Transcript at 92.

From Hughes Tool Company records, it was established that Hurst talked with Mr. Wisler. *Id.* at 93. Hurst stated concerning his ten-minute conversation with Wisler:

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Id. at 94. Neither during this meeting, nor in subsequent meetings so far as revealed by the record, did Hurst even suggest that the information he was giving to Hughes was to be considered confidential. *Id.*

Breach of a confidential relationship is different from an improper discovery of a trade secret. The *Christopher* case quoted at the beginning of this opinion is a clear example of the discovery of a trade secret by improper means. In *Christopher*, duPont was building a new plant and before it could get the roof over its highly secret new process for producing methanol, the Christophers took aerial photographs of the new construction. In *Christopher*, there was no confidential relationship; however, there was a discovery of a trade secret by stealthy and improper means. The *Christopher* court stated that trade secret protection was not limited to a breach of a confidential relationship when the facts of the case raise the issue of some other wrongful conduct on the part of one discovering the trade secrets of another. *E. I. duPont deNemours & Co. v. Christopher*, *supra*, 431 F.2d at 1015.

Although neither case shows breach of a confidential relationship, the instant case differs from *Christopher*. After his initial meeting with Wisler, Hurst had several telephone conversations with representatives of Hughes Tool in which they asked numerous questions; some of which concerned boron densities, carburization techniques, boronization depths, hardness levels and other testing results. *Id.* at 102. In addition, Hurst, this time with an advance appointment, made a second trip to Houston to Hughes Tool. For his second visit, Hurst took all of his test results and notes with him. *Id.* at 104–05. Although Hughes Tool employees asked him more questions and asked to keep his cone, they refused to accept any of Hurst's test results and notes. *Id.* at 108. During this second meeting, Hurst did tell Hughes that he proposed, "some sort of sharing of royalty of some sort." *Id.* at 107. After this second trip to Houston, Hurst never heard from Hughes Tool again. The Hurst situation differs from *Christopher* in that Hughes Tool did not use stealth or improper means of discovery to get information from Hurst.

The Use of the Trade Secret

[5] After receiving Hurst's cone, it was sent to the Product Metallurgy Group at Hughes for testing. Transcript at 187. Prior to the testing of Hurst's cone, Hughes Tool had never done any actual testing of boronized cutting structures. *Id.* at 192. Therefore, six tests were ordered for the cone, among which were the boring mill test for wear resistance and a microscopic examination for structural properties of the treatment itself, a knoop hardness test and a test for carburization. *Id.* at 191–203. Upon completion of the testing, Mr. Prince, an employee of Hughes Tool, wrote a "closure" or closing memorandum in which it was stated:

> "The results of this testing has indicated that boronizing may be a way of

> improving the life and performance of the milled tooth cones. Further testing and evaluation will be necessary to determine how the cracking in the case will affect the performance of the cone and how the extremely hard surface will hold up under actual drilling conditions where all information obtained to this date indicates a cone with a 'soft skin' performs the best. These and other questions will have to be answered by other tests."

Id. at 236. The entire body of work done on Hurst's cone was classified as a sub-program by Hughes Tool. *Id.* at 239. According to Clyde Dill, the Director of Research for Hughes Tool Company, this sub-program was one of the bases for further testing. *Id.* at 242. The results gleaned gave Hughes Tool encouragement to go forward with other boronizing testing, which led to several Hughes Company patents for boronizing bearing surfaces and cutting structures. *Id.* at 253–54, 357–366.

In its brief, Hughes Tool asserts that it did not "use" Hurst's idea. Hughes points out that its patents do not prevent Hurst from boriding cones in the same manner as he has done in the past, i. e. hard facing and then boronizing. Brief of Appellees at 42, Transcript at 507. Furthermore, Hughes claims Hurst's process brought it nothing of value and states:

> it is impractical to boronize the *bearing* surface of a cutter because you have to carburize, boronize, harden and temper the cutter; if you do that, the bearing surface will be tapered out of round. Hughes would then have to grind it and boronize the surface so hard that only diamond grinding could be used, and that would remove the boronized case.

Brief of Appellee at 42–43. Nevertheless, Mr. Felsman, testifying for Hughes stated:

> The other patent relating to cones that was retained by Mr. Scales and Mr. Dill teach a substitution of his boronized treatment for the hard facing on the cones. The cone Mr. Hurst brought was a standard OWD Hughes cone and it had a lot of hard metal put on the teeth with a welding technique and real hard particles in the center, tungsten carbide, and then the boronizing treatment was applied over those things.
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> The idea that Mr. Scales subsequently had was that possibly if you did the boronizing technique correctly you could do without all this hard facing requirement on those cones and so we obtained a patent for him on the idea of substituting this boronizing treatment for the hard facing treatment.

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Hughes Tool is presently boronizing journal bearing pins in certain models of its drill bits. Transcript at 262. The company does not now boronize cutting structures, although from the testimony concerning its patents, nothing prevents it from doing so.

Despite the excellent efforts of counsel for Hurst, the ultimate use of Hurst's information in this technical case is hard to pin-point. Regardless of its protestations to the contrary, it appears that Hughes Tool did "use" Hurst's information in the sense that the work it did on Hurst's cone provided background information which led to at least one company patent. Nevertheless, the cone and the information supplied by Hurst clearly were not the sole or even the primary source of data used in making the decision to boronize journal bearing pins or

indeed to boronize or not to boronize any other structure. In sum, Hurst's information, while of some benefit provided only negative, "what not to do", input to Hughes.

Thus, we reach three conclusions concerning the complex factual situation before the district court. First, we affirm the finding of the district court that there was insufficient evidence of the existence of a trade secret to go to the jury. Second, we find no record evidence that Hurst took steps to protect himself, or that Hughes breached Hurst's confidentiality or that Hughes improperly discovered Hurst's information. Third, we find that the evidence that Hughes did to some extent avail itself of the information supplied by Hurst is of no benefit to Hurst in establishing liability.

Since liability was not established, such damage as Hurst suffered may not be recompensed. We need not explore the question of the award of damages.

AFFIRMED.

IN THE UNITED STATES COURT OF APPEALS

FOR THE FIFTH CIRCUIT

No. 78-3798

WILLIAM D. HURST,

Plaintiff-Appellant

versus

HUGHES TOOL COMPANY

Defendant-Appellee

Appeal from the United States District Court
For the Northern District of Texas

ON PETITION FOR REHEARING

Before GODBOLD, SIMPSON and THOMAS A. CLARK, Circuit Judges.

PER CURIAM:

IT IS ORDERED that the petition for rehearing filed by appellant in the above entitled cause is hereby DENIED.

ENTERED FOR THE COURT:

/s/
UNITED STATES CIRCUIT JUDGE

Office-Supreme Court, U.S.
FILED
MAY 18 1981
ALEXANDER L. STEVAS,
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No. 80-2023

In the

SUPREME COURT OF THE UNITED STATES

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WILLIAM D. HURST,

Petitioner,

v.

HUGHES TOOL COMPANY,

Respondent.

ON WRIT OF CERTIORARI TO THE
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APPENDIX

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WILLIAM D. HURST,

Plaintiff-Appellant,

v.

HUGHES TOOL COMPANY,

Defendant-Appellee.

No. 78-3798.

United States Court of Appeals,

Fifth Circuit.

Jan. 22, 1981.

A diversity case presented problem in the law of trade secrets, disposed of by the United States District Court for the Northern District of Texas, at Dallas, Robert Madden Hill, J., on a motion for directed verdict in favor of the defendant. On appeal by the plaintiff, the Court of Appeals, Simpson, Circuit Judge, held that: (1) there was insufficient evidence of existence of a trade secret to go to the jury; (2) no evidence appeared on record that plaintiff took steps to protect himself

or that defendant breached plaintiff's confidentiality or improperly discovered plaintiff's information; and (3) evidence that defendant did to some extent avail itself of information supplied by plaintiff failed to establish liability.

Affirmed.

1. Torts 10(5)

Governing Texas law as to use of another's trade secrets is that adopted from Restatement of Torts, providing that one who discloses or uses another's trade secret, without privilege to do so, is liable to the other if he discovered the secret by improper means or if his disclosure or use constituted breach of confidence reposed in him by other in dislosing secret to him.

2. Federal Civil Procedure 2126,2608

Motions for directed verdict and judgment n.o.v. should not be decided by

which side has better case, or granted only when there is complete absence of probative facts to support jury verdict, but, rather, there must be conflict in substantial evidence to create jury question.

3. Torts 28

In diversity case, plaintiff's evidence to prove that his information was a trade secret deserving protection was insufficient to make case for jury on such issue.

4. Torts 28

In diversity case, presenting problem in law of trade secrets, evidence including testimony that plaintiff did not even suggest to defendant that information plaintiff was giving to defendant was to be considered confidential failed to make case for jury on issue of confidential relationship.

5. Torts 27

In diversity suit, evidence indicating only that defendant did to some extent avail

itself of information supplied by plaintiff failed to establish liability on part of defendant for use of trade secret.

Appeal from the United States District Court for the Northern District of Texas.

Before GOLDBOLD, SIMPSON and THOMAS A. CLARK, Circuit Judged.

SIMPSON, Circuit Judge:

The instant diversity case presents a problem in the law of trade secrets, which was disposed of by the district court on a motion for directed verdict in favor of defendant. We affirm.

[1] The governing Texas law as to the use of another's trade secrets is well expressed in E.I. duPont deNemours & Co., Inc. v. Christopher, 321 F.2d 1012 (5th Cir.1970) where we stated:

The Texas Supreme Court specifically adopted the rule found in the Restatement of Torts which provides:

> "One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if
>
> (a) he discovered the secret by improper means, or
>
> (b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him * * *"

Restatement of Torts § 757 (1939). Id. at 1014. The issues in this trade secrets case follow from the well settled law; namely, was the trial court correct in directing a verdict against the plaintiff on the issues of: (1) the existence of a trade secret, (2) the breach of a confidential relationship or the improper discovery or a trade secret, (3) the use of a trade secret, and (4) the award of appropriate damages.

The Existence of a Trade Secret

To decide whether the trial court was correct in finding that there was insufficient evidence that Hurst's information was a trade secret deserving protection, two aspects of the problem must be examined: (1) what is the nature of the trade secret and (2) what are the facts surrounding the existence, discovery and use of the trade secret. First, Hurst alleges that the nature of the trade secret is, "that the use of boron coatings in wear surfaces and drill bits will make them more advantageous, accomplish certain benefits, along with the proof which he submitted to them that that concept in that trade secret is a viable, workable concept." Oral argument, statement of Mr. Jackson. See transcript at 110.

Second, the facts[1] surrounding the

---

1. The facts as we state them herein are extracted largely from Hurst's testimony and in all instances are stated in the light most favorable to Hurst.

existence, discovery and use of the alleged trade secret are best approached chronologically. Hurst initially became interested in the concept of applying boron coatings to metal after reading an article in the August, 1969 issue of Scientific American. This magazine pirce, written by Dr. Newell Cook, was on a metalliding process patented by General Electric. Transcript at 16-17. Dr. Cook, who was employed by General Electric's research and development department, was the inventor of the process discussed in the article. Id. at 19.

After reading this article, Hurst telephoned the author and asked him general questions concerning the process, its cost and its availability. Id. About this same time, Hurst, who was looking for an application for Dr. Cook's process, also had discussions with friends in the oil business, who complained of the high cost of removing and replacing worn drilling bits.

Soon thereafter, Hurst conceived the idea of using a boron coating on the bearing and cutting surfaces of oil and gas well drill bits to give them longer life and to reduce fixed costs in the drilling business. Id. at 18-23. While doing this preliminary research, Hurst checked every source he could find and did not discover that boron had been applied to drill bits. Id. at 23.

After this initial research and development phase, Hurst bought a drill bit, had it dismantled and had the drill cones boronized inside and out as well as heat treated. Id. at 29-40. Hurst reassembled these drill bits and bought two untreated drill bits. He then supervised the digging of test drill sites, from which he generated comparison data showing that the boronized drill bits were superior to the untreated bits. Id. at 40-46. After the test sites were dug, Hurst had the treated bits cut

apart and analyzed. Id. at 47-54. From the information gained, Hurst repeated and improved the process with other drill bits. Id. at 56. It appears from his testimony that Hurst spent between fifteen and twenty thousand dollars on this project. Id. at 110. It is also apparent that his experiments were thorough and workmanlike.

While Hurst was testing and prior to his initial visit to Hughes Tool Company on September 16, 1970, Hughes Tool had also been looking into the boronizing process. For some time prior to Hurst's visit, Hughes had considered boronizing some of its products and had initiated work on journal bearings. Id. at 292. Defendant's exhibits five and six are particularly interesting; they show that Hughes was asking as early as 1968 about metalliding and was receiving suggestions that boron would produce a hard surface on steel. Transcript at 297-304. Exhibit ten, another important

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directed verdict, which we think the trial court correctly applied, was stated in Boeing v. Shipman, 411 F.2d 365, 374-75 (5th Cir. 1969) (en banc):

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> Gave him a few figures, hardness figures and such, asked it he'd be interested in testing it. He indicated he would.

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Thus, we reach three conclusions concerning the complex factual situation before

the district court. First, we affirm the finding of the district court that there was insufficient evidence of the existence of a trade secret to go to the jury. Second, we find no record evidence that Hurst took steps to protect himself, or that Hughes breached Hurst's confidentiality or that Hughes improperly discovered Hurst's information. Third, we find that the evidence that Hughes did to some extent avail itself of the information supplied by Hurst is of no benefit to Hurst in establishing liability.

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AFFIRMED.

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Plaintiff-Appellant

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PER CURIAM:

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ENTERED FOR THE COURT:

/s/
UNITED STATES CIRCUIT JUDGE

Office-Supreme Court, U.S.
FILED
JUL 20 1981
ALEXANDER L. STEVAS,
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No. 80-2023

IN THE

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OCTOBER TERM, 1980

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Petitioner,

v.

HUGHES TOOL COMPANY,

Respondent.

ON WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

BRIEF IN OPPOSITION

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QUESTIONS PRESENTED FOR REVIEW

Respondent submits that the only question presented for review is whether or not the Federal Court of Appeals improperly applied the law of trade secrets in such manner that reversible error was committed.

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BRIEF IN OPPOSITION

The reference to the opinion below and to the jurisdictional prerequisites are adequately set forth in the Petition for Certiorari.

STATEMENT OF THE CASE

Petitioner's Statement of the Case is lengthy, goes into great technical detail, and indeed violates both the letter and the spirit of this Court's Rule 21.1(g), which calls for "a *concise* statement of the case containing the facts material to the consideration of the questions presented." [Emphasis by the Court] Most of Petitioner's "statement" is really an interpretive summary of part of the complex trial testimony, and much of it represents conclusions as to what might be inferred from certain technical statements without placing them in proper context.

The facts of this case are correctly stated by the Fifth Circuit Court of Appeals in its opinion. Therefore, Respondent does not consider it necessary to set forth a separate "Statement of the Case". If a fuller statement of the evidence is desired, Respondent respectfully refers the Court to the Appendix attached to this Brief, which Appendix sets forth a summary of the testimony below (with citations to the Transcript of the trial).

REASONS FOR DENYING THE WRIT

Petitioner spends ten pages listing reasons for allowance of the Writ by this Court, but in actuality the first eight pages are merely ruminations on inventor incentives and rewards in the context of protection afforded by patent grants and trade secret law. Petitioner argues that there has been during the last decade a decline of the protection and incentive afforded to potential inventors or innovators; no citations to any authority are given for this remarkable conclusion. In actuality, any decline in scientific and technological development in this country has been recognized by industry

leaders as due to a failure to spend enough for appropriate research and development. See "Technology: America's Competitive Edge," a special insert in *Time* (June 22, 1981) 41-44, published by the Westinghouse Corporation. Relying upon statistics published by the National Science Foundation and the U.S. Department of Commerce, the report points out that the number of domestic patent applications by Americans has been flat for several years but that in contrast the number of those filed here from foreign countries has been rising every year. The report recognizes that America already has the technologies sufficient for the maintenance and future expansion of America's leadership role in the world, but that:

> "The problem lies in implementing those technologies. Because, while the development of new technologies costs a large amount of money, turning them into national realities requires far more. Something else is needed: a united effort by industry, labor and government. Obviously, management should make a greater R & D effort to refine today's technologies, and develop new ones for tomorrow. Employees must realize that their cooperation is vital if America is to remain the most productive nation in the world. And our elected officials need to re-establish a sound economic foundation, because that is basic to all social progress. *In particular, tax laws and monetary policy must be structured to allow industry to accumulate capital needed to apply available technologies, and invest in the development of still more advanced ones."*
> [Emphasis added]

Nowhere is it suggested that technological development in this country has declined because of inadequate patent and trade secret protection. The report does call for reforms, but in the tax law and monetary policy area.

Finally, after a long prologue, Petitioner at p. 26 of his Petition reaches the only issue in this case, that is, whether or not the Fifth Circuit Court of Appeals correctly applied the law of trade secrets.

Petitioner argues that although the Fifth Circuit Court of Appeals recognized that Texas had adopted §757 of the *Restatement of Torts,* which condemns discovery of a trade secret by "improper means", that nonetheless the Court of Appeals narrowed the *Restatement* test considerably. Petitioner claims:

> "The Court of Appeals pointed out that an earlier action before it, *E. I. duPont deNemours and Co., Inc. v. Christopher,* [431 F.2d 1012 (5th Cir. 1970)] *supra*, had involved the improper discovery of a trade secret by 'stealthy' means, and it therefore held that since the means used by Hughes Tool here did not employ 'stealth', they could not be held to be improper."

In other words, Petitioner is arguing that the Circuit Court altered the *Restatement* law of trade secrets by reading into it the requirement that "improper discovery" of a trade secret requires a showing of "stealth".

It is submitted that the Petitioner's argument is not supported by the language of the Fifth Circuit's opinion. That court cites the *Christopher* case to illustrate the difference between breach of a confidential relationship and discovery of a trade secret by "stealthy and improper means." The Court then goes on to say (at p. 2885):

> "The *Christopher* court stated that trade secret protection was not limited to a breach of a confidential relationship when the facts of the case raised the issue of some other wrongful conduct on the part of one discovering the trade secrets of another."

The Court of Appeals concluded by holding (at p. 2885):

> "The Hurst situation differs from *Christopher* in that Hughes Tool did not use stealth *or* improper means of discovery to get information from Hurst." [Emphasis added]

Nowhere does the Appellate Court suggest that *only* by showing stealth can a Plaintiff establish trade secret liability for improper discovery of a trade secret.

This Honorable Court has cited the *Christopher* case in discussing the concept of "improper means". See *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 475-76 (1974), where it was held:

> "The law also protects the holder of a trade secret against disclosure or use when knowledge is gained, not by the owner's volition, but by some 'improper means', Restatement of Torts §757(a), which may include theft, wire tapping, or even aerial reconnaissance." [Citing *Christopher*]

Thus, the Court recognized that an issue on "improper means" does not even arise where an "inventor" has voluntarily disclosed his alleged secret. As the Fifth Circuit's opinion discloses (at pp. 2885, 2887), Petitioner did not take steps to protect himself.

Although Respondent is of the opinion that the language used by the Court of Appeals is correct and does not conflict with any applicable Texas state court decisions, nonetheless still another reason for denying certiorari in this case is that should the writ be granted this Honorable Court would be required to affirm the lower court's judgment. As mandated by 28 U.S.C. §2111, this Court must render its ultimate judgment "without regard to errors to defects which do not affect the substantial rights of the parties." Affirmance of the trial court's judgment was based upon three independent

grounds, as pointed out by the Fifth Circuit at p. 2887:

> "Thus, we reach three conclusions concerning the complex factual situation before the court. First, we affirm the finding of the district court that there was insufficient evidence of the existence of a trade secret to go to the jury. Second, we find no record evidence that Hurst took steps to protect himself, or that Hughes breached Hurst's confidentiality or that Hughes improperly discovered Hurst's information. Third, we find that the evidence that Hughes did to some extent avail itself of the information supplied by Hurst is of no benefit to Hurst in establishing liability."

In order to establish liability, Petitioner had to present sufficient evidence on *all three elements* of his trade secret cause of action. Since he failed to do this, the judgment for Respondent in this case would still have to be affirmed even if this Honorable Court disagreed with the Fifth Circuit's opinion on "improper means". *Cf. F.C.C. v. Pacifica Foundation,* 438 U.S. 726 (1978).

It is also submitted that Petitioner has failed to show that any of the Rule 17 considerations governing review on certiorari apply in this case. Unlike old Rule 19, which counted as a consideration whether a federal court of appeals "has decided an important state or territorial question in a way in conflict with applicable state or territorial law", its successor Rule 17 is silent on the subject. Professor Moore has pointed out:

> "And with the elimination in 1980 of the provision [of old Rule 19] it is not likely that a conflict between a decision by a court of appeals and an important state or territorial law will warrant certiorari, unless the circumstances of the case are peculiar, as possible when the decision of the court of appeals is so egregiously in conflict with an important local law as to call for the Court's power of supervision."

13 *Moore's Federal Practice* ¶ 817.25-1[3] at p. SC17-30. Because the local court of appeals is the one most familiar with the proper interpretation of applicable state law, ordinarily the Supreme Court does not grant certiorari to review considered determinations of questions of state law by intermediate federal appellate courts. See *Huddleston v. Dwyer,* 322 U.S. 232, 237 (1944).

A major purpose of the discretionary certiorari jurisdiction is to allow the Court to review cases involving questions of importance that are in the public interest. See *Magnum Import Co. v. Coty,* 262 U.S. 159 (1923). The importance of the issues must embrace that of the public as a whole, not just the interest of individual litigants. See *Layne & Bowler Corp. v. Western Well Works, Inc.,* 261 U.S. 387 (1923). But even where an issue is admittedly important, it also must be fundamental and reoccurring and should "reach to a problem beyond the academic or the episodic." *Rice v. Sioux City Cemetery,* 349 U.S. 70, 74 (1955). This is not true in the instant case, where the complex facts are such that the Fifth Circuit's opinion is of necessity confined to the unusual situation presented. Moreover, the Court has often held that "a court of law, such as this Court is, rather than a court for correction of errors in fact finding, cannot undertake to review concurrent findings of fact by two courts below in the absence of a very obvious and exceptional showing of error." *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.,* 336 U.S. 271, 275 (1949), involving findings of patentability in a complex technical field.

Indeed, an authoritative American Bar Foundation study bears out the lessening importance of "conflicts among federal circuits or with state supreme courts" as a reason for granting review. During 1958-60, 6.4% of the total applications for review on the Supreme Court's docket were of the

type found to present a "conflict" and were accepted for review. But by 1971-73, that percentage had dropped to only 2.6%. See G. Casper and R. Posner, *The Workload of the Supreme Court* 88, table 4.12 (A.B.F. 1976). Indeed, although the Court's docket grew at a rapid rate from 1958 to 1973, the percentage of cases in which a conflict was even *alleged* substantially declined. *Id.* at 87.

The decline in both alleged and actual found "conflicts" cases coming to this Court is probably due to the fact that the statistics show that the duration of unresolved conflicts after denial of Supreme Court review is relatively short. The A.B.F. study found "only about a quarter of the [conflicts] cases were unresolved after three years." *Id.* at 91. Discussed was the finding in the Hruska Commission survey that leading practicing attorneys:

> ". . . did not think that unresolved conflicts among the circuits or state supreme courts posed a serious problem in their practice. The principal exception is one that proves the rule: patents. The fact that the validity of a patent is determined anew in every infringement suit means that sometimes a patent is held valid in one circuit and invalid in another. This is a problem, but no one thinks the solution is for the Supreme Court to pass on the validity of individual patents!" *Id.* at 91.

Or, one could add, "on the validity of individual alleged trade secrets!"

CONCLUSION

Even a short analysis of the circuit court's opinion reveals that it is not in conflict with state trade secret law concerning the means involved in acquiring "secret" information. But even if it were, the judgment for Respondent must stand

because Petitioner failed to present sufficient evidence to support other necessary elements of his cause of action.

Additionally, the case does not merit review because it only involves an alleged misapplication of Texas law to a unique technical process. An opinion here has little value as precedent.

The writ should be denied.

Respectfully submitted,

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CERTIFICATE OF SERVICE

This is to certify that three true and correct copies of the foregoing Brief in Opposition have been mailed this _____ day of July, 1981, to Richard L. Jackson, Esq., Shuford, Jackson & Allen, 5200 First International Building, Dallas, Texas 75270, Counsel of Record for Petitioner.

APPENDIX

SUMMARY OF TRIAL TESTIMONY

Plaintiff William Hurst went to the University of Kansas for two and a half years and took courses in foundry practices, investment casting, and related courses. (Tr. 14) He operated several small foundries for two years after he left school. (Tr. 16) His claim against Hughes Tool Company, in his own words, involves a trade secret that consists of "simply the application of boron on the cutting surfaces, wear surfaces of certain parts on a tri-cone rock bit." (Tr. 16)

About August, 1969 he read an article in *Scientific American* that described a patented General Electric "metalliding" process by which boron coatings could be applied to the surface of other metals to make a harder surface. He began looking for a good application and contacted Dr. Newell Cook, the inventor of the process, for general information. (Tr. 17-20)

Mr. Hurst described Dr. Cook's metalliding process for applying elements like boron on metals such as steel. (Tr. 23-24) Essentially, it is an electrolosis process much like chrome plating. After Hurst decided that metalliding of boron must have some applicabiliy to drill bits, he called Dr. Cook back, asked him technical information, and then contacted a company called General Technologies Corp., which had a metalliding license from General Electric. (Tr. 25-27)

Hurst met with a Bruce Fosnocht at General Technologies and discussed the possibility of that company boriding some bits for Hurst and if Hurst could get an

exclusive contract with General Technologies and its parent, City Service Corporation, for this work. (Tr. 28)

Hurst purchased a 7 7/8 inch steel tooth drill bit and had it dismantled to remove the three cones, or cutters, that are contained on the bit head. Attached as Exhibit A to this brief are drawings of the two basic types of oil field drill bits, showing the three cutting cones and the bearing shafts upon which each cone rotates. Hurst had conversations with Fosnocht as to how the boriding was to be done. (Tr. 30-34) He had additional conversations with Dr. Cook, who suggested certain minimum and maximum depths of treatment for boriding, based on his past experience. (Tr. 35)

After the cones were borided, Hurst took the reassembled drill bit to Kathol Petroleum Company and had them tested. (Tr. 39) Hurst stated that the test indicated to him that the boronizing treatment had performed well. (Tr. 43) Hurst tested two more drill bits, and tests showed that boriding the drill bits was of value. (Tr. 57-91).

Hurst took his treated drill-bit cones and traveled to Houston on September 16, 1970, to present them to Hughes Tool Company and Reed Tool Company. He stated that he had not made any prior arrangements with anyone at Hughes. (Tr. 92) After arriving at Hughes with one of his cones he told the receptionist that he thought it was worthwhile for someone to look at it. She called Hughes engineer Wisler, and Hurst said of the ten minute conversation with Wisler:

> "I was as brief as possible. I tried to give him a quick run down on the cone, told him it was - that it had a layer of boron on it. Gave him a few figures hardness figures and such, asked if he'd be interested in testing it. He indicated he would. That was about the extent of the conversation." (Tr. 93-94)

Hurst stated that during the course of the conversation he did not ask anything to be held confidential or that anything was secret. (Tr. 94-95) He got no written agreement from Hughes or even a letter indicating what he wanted them to evaluate. Hurst could find only one record of a subsequent phone call with Hughes Tool Company, that being for the next day, September 17. (Tr. 98) He had more conversations at later dates, all with the same man. However, upon being questioned by the court, Hurst was not able to even identify that individual. (Tr. 101) In later conversations he discussed technical information about boron. (Tr. 101) He doesn't believe they ever called him; he would call and he would answer questions that the Hughes Tool man posed. He had to get answers from Dr. Cook about boron depths, hardness levels and so on. (Tr. 102) He thereafter went down a second time to Hughes Tool and met the same unknown gentleman and showed him some sample pieces of metal. (Tr. 103-104) The Hughes employee indicated they were interested to that point and wanted more information and "then sort of a we'll see basis."

At a claimed second (and last) meeting with the Hughes man, Hurst claims that he was asked what he "proposed" and that he replied "some sort of sharing or royalty of some sort" and that that was the only time they had ever talked about it. (Tr. 107) The Hughes representative looked at Hurst's information, but he did not want it and Hurst took it back with him. Hurst went back to Wichita, and he never heard from Hughes Tool again. He assumed it was a lost cause and that Hughes was not interested. (Tr. 108) Hurst claims he spent $15,000 to $20,000 trying to develop his "idea", but that included money raised from other people such as Jerry Kathol. (Tr. 101)

On cross-examination, he admitted he took general

courses in addition to casting courses and did not achieve an engineering degree; he quit going to the school in 1961 or 1962. (Tr. 112) Additionally, he worked in a restaurant and was a car salesman. Today he buys and sells medical surplus equipment. (Tr. 114-15)

It was Dr. Cook's article in the *Scientific American* (Def. Exh. 44) that gave him the idea of putting boron on steel; it was the first time he had heard about boron. (Tr. 117) Hurst did not even remember the following quotations from it:

> "Borided steels show a great promise for bearings and for dies. At the present stage of development they are too brittle to be used as cutting tools." (Tr. 120)

Hurst admitted that he had never applied boron to steel himself. (Tr. 120-21) Def. Exh. 46 was the contract between Hurst and General Technologies Corporation. In paragraph 3, G.T. gave Hurst the exclusive right to purchase metallided products for the oil field industry, and G.T. agreed that it would offer for sale metallided (borided) products to anyone other than Hurst for ultimate use in the oil field industry. (Tr. 123)

Paragraph 4 of the agreement provided that Hurst would use his best efforts to reasonably exploit to the maximum use and resale of metallided (borided) products in the oil field industry and would not purchase or otherwise deal in metallided products from others as long as General Technologies was capable of meeting the demand created by him. (Tr. 124) Hurst admitted that he was to exploit to the maximum G.T. borided products. (Tr. 125) The date of this agreement was June 22, 1970, just before the September that he went to Hughes Tool Company (Tr. 125-26)

When Hurst went to Hughes, he used the name Sigma Company. He was simply going to offer General Technologies as a source of boriding if Hughes Tool Company

wanted to use it. (Tr. 126) When asked if he didn't consider that disloyal to G.T., he replied that it was only a year's contract and worthless and would not have done him any good at all. (Tr. 127) Moreover, it was not the contract they had indicated they were going to send, even though he signed it and had a lawyer furnished by a friend of his examine it and approve it. (Tr. 127-28) Hurst claimed he did not tell Hughes about General Technology. (Tr. 130) However, Hurst was then shown his deposition wherein he stated:

> "I said I thought the application was great and I had a source to have it done if they wanted to have it done there." (Tr. 132)

When asked would it be reasonable for Hughes Tool to assume that he was there attempting to sell them on using that source to put boron on their drill bits, that is, that he was trying to sell them a service, he agreed that maybe it would be reasonable. (Tr. 133)

When Hurst visited Hughes Tool, he did not tell them that he invented something, or that he had a secret, or that he had confidential information, or anything like that. He did leave his sample with them because it had the boron somehow put on by General Technologies. Hurst admitted he left his sample just as a salesman would do, and that he was trying to sell Hughes Tool Company something. (Tr. 134-35)

Seven years later he called Mr. Dill of Hughes Tool Company, in 1977. Hurst asked Dill if he remembered Hurst's visit, the reason being that it was concerning other litigation [against Reed Tool Company]. He said something to the effect that he had no beef against Hughes Tool Company, and the call had originally been placed from his lawyer's office. (Tr. 135-36)

With respect to the tests done at Kathol Petroleum, the method was to drill part way with one drill bit, then change to

a second bit, and then change to the third bit. (Tr. 151) Hurst admitted that various strata would be of different hardnesses at different levels of the same hole, and that a better way to test a treated bit versus two non-boronized bits would be to drill three separate holes. (Tr. 152-53) Kathol Petroleum had put up $5,000 to $10,000 for his living expenses and to pay for the testing of his drill bits, and the test reports were showed to Jerry Kathol. (Tr. 155-56) After the test reports were showed to him, Kathol abandoned the project. However, Hurst denies that it was because of poor results, even though he admitted that a drilling contractor gets paid by the foot and can make more money if he can drill faster. (Tr. 156)

Not only did Hurst take his "idea" of boriding drill bits to Kathol and Hughes, but he also took it to Hughes' competitor, Reed Tool Company the same day he took it by Hughes. (Tr. 158) He had about the same conversations with Reed as he did at Hughes. Additionally, he brought the idea to other individuals, such as Ayash Oil, Stan Bell, Proctor Richie, and perhaps others. (Tr. 159-60)

From Hurst's deposition taken in his lawsuit against Reed Tool Company, he stated that at his second meeting with Reed Tool that they would be interested in pursing his boriding idea only "if I would guarantee that I was not out, I think somebody used the term shopping this idea. They wanted to make sure, and this again is not a quote, that they didn't want to spend a lot of their money on it only to have it in somebody else's production line which I agreed to." (Tr. 163)

After his September 1970 visit to Hughes, he had a second and final meeting sometime between November and January. As near as he can remember, it was 40 minutes and they stayed in the reception area and did not go outside and look

around. (Tr. 163-64). However, Hurst in his deposition has stated that he had spent 2 1/2 hours at Hughes, that he had been shown all around the facilities and seen the general shops and some brewery, and that either Mr. Cook or Mr. Dill was in his presence. (Tr. 165) Hurst denied that he changed his story because he had since found out that the brewery had burned two years before Hurst had even been there. (Tr. 166-67) Finally, Hurst agreed that no one at Hughes ever promised him anything or made any agreement with him at all. (Tr. 167) With respect to the test run on Jerry Kathol's wells, Kathol refused to do it on credit. Instead, Hurst made a deal that Kathol was to receive 75 percent on future profits that might come about because of the boriding venture. Kathol paid Hurst $5,000 or $10,000 to run the tests. (Tr. 173) Shown to Hurst was Pl. Exh. 28, where in the last paragraph Hurst told Kathol:

> "The program certainly needs, I feel, further testing as well as more sophisticated engineering and control of test conditions and environment before a realistic evaluation can be made and I would be remiss in my position if I were to state that it will or will not be successful at this point." (Tr. 174)

Hurst admitted that he did not boride the shaft (or pin) upon which a drilling cone rode because neither he nor General Technologies had the facilities to boride the shaft because it was in the assembled bit. (Tr. 180)

Called as an adverse witness by Hurst was Clyde Dill, Director of Research for Hughes Tool. (Tr. 181) During the fall of 1970 and spring of 1971 he was chief metalurgist. Dill was shown the file kept by Hughes dealing with the testing of Hurst's cone. Dill was examined to great lengths on the number and type of tests performed on Hurst's cone. (Tr. 193-206) No one from the company had ever contacted

Hurst and asked him any of the questions about depth of boronization, proper type of heat treatment, carburization and so on. It was not necessary. (Tr. 206)

Dill then testified extensively regarding further tests and technical terms involving Hurst's drilling cones. (Tr. 206-35) Pl. Exh. 67 was the closing memo on the tests. The third paragraph of this memo stated that boronizing *might* improve the life of the cones and that *further* testing and evaluation would be necessary. (Tr. 235-36)

Dill explained the way Hughes categorized its program, sub-program and project file. (Tr. 239) The initial work in one of the sub-programs was started by the project involving Hurst's cone. (Tr. 240) However, the tests on Hurst's cone was only one of the bases for further testing of boronizing. (Tr. 242)

Through direct examination Plaintiff's counsel attempted to elicit from Dill that the various Hughes file on boronizing followed the project file set up on Hurst and were interrelated. (Tr. 248 ff) Dill was asked if results learned from one test were then incorporated into the next test, but Dill pointed out that counsel was mixing apples and oranges, because some of the files did pertain specifically to steel tooth cones but Hughes Tool Company had done other work prior to Hurst even appearing which related to bearings and in no way related to the work done on his cone. Dill did not agree that the line of progression that counsel was trying to show would be what necessarily had occurred. (Tr. 251-52) Dill was shown Pl. Exh. 72, which is also attached at the back of Appellant's brief. Dill replied that there were more numbers on it than he talked about and that he would have to check the files very carefully to be sure that the relationship shown exists. (Tr. 257)

Today Hughes Tool Company only boronizes journal

bearing shafts; boron is not used on anything else. (Tr. 262) Hughes offers certain sizes of drill bits with boronized bearing shafts (pins), but they are interchangeably sold to customers with bits having shafts using special metal inlays. Boronizing is not essentially an improvement over the performance of the other rock bits. It has some economic value in the processing and it's more a matter of economics than it was one of performance. (Tr. 265-66)

If the test results on the Hurst cone were going to be beneficial to Hughes, they would have contacted Hurst. Hurst did not call Hughes back and there was no further contact. Dill denied that anyone at Hughes Tool decided that Hughes Tool would boronize and not tell Hurst about it. (Tr. 283)

One standard way of hardening steel surfaces and drill bits that are subject to a great amount of wear is by carburizing, a process in which the steel is heated at a high carbon content environment whereby the carbon diffuses into the steel and gives it a hard wear surface. The 80 person Hughes research department keeps up to date with all new processes and applications and even with old processes which may become suitable because there may be changes in design and use of their products. (Tr. 285-86)

Boron is an element immediately before carbon on the periodic table and has similar characteristics. Like carbon, it is diffused into steel to make it harder. This has been known since the early 1900's and most metallurgists became aware of it through their association with surface treatments. A disadvantage of boronizing is that you get a very shallow case [diffusion into the upper part of the steel for only a shallow depth] for a very long time in the furnace compared to carburizing and if any grinding has to be done on it, you are likely to remove it. It was not an advantageous process to

Hughes Tool until they began to produce the journal bearing bit. (Tr. 286-87) A journal bearing is different from a ball and roller bearing in that you have a cylindrical surface on which the part (a cone) rotates instead of two parts separated by balls or rollers. (Tr. 288)

There is nothing about the boronizing process that has not been available and not known for many years. There are various ways to do it. You can boronize by the pack method in which you use a mixture of boron carbine and graphite and several other additives. You can do it in a gas environment and you can also do it in a salt bath. The salt bath technique was the one used by Hurst, but it has not been used by Hughes Tool for a number of reasons. Molten salt is very expensive and it is very critical in that you have to be very careful how you maintain chemicals that are in the salt. You have to heat the salt up to a high temperature. This salt bath cannot be used on the standard Hughes Tool Company product line because the products are too large and it would require expensive, large salts baths. Moreover, there is a serious safety factor in that if the parts by any chance that are put into the salt have any moisture on them, there can be an explosion and the 1600° salt can cause severe burns. Hughes Tool Company uses a pack boronizing method which is a relatively simple process and has been used for years on the carburizing process. (Tr. 288-91)

Prior to Hurst's visit to Hughes Tool Company on September 16, 1970, Hughes had been looking into the boronizing process for quite some time and had considered using it on their products and had actually initiated work on journal bearings. (Tr. 292) Def. Exh. 1 was a letter from Met-Chem of Nevada, dated March 8, 1968 to Hughes's vice president of manufacturing, Kistler, offering a metal diffusion process whereby a mild steel is made into a harder

and more heat resistant end product. On behalf of Hughes, Dill answered that letter on March 15, 1968 and indicated that Hughes Tool would be interested in any economical process that could produce an abrasion resistant coating comparable to Tungstun Carbide. [Def. Exh. 2] Tull of Met-Chem wrote back on March 26, 1968 in which he answered Dill's questions and states that he would treat the base metal (steel) with boron; additionally, he gave more information and answered specific questions that Dill had asked him. (Tr. 292-95).

Def. Exh. 4 was a letter from Hughes vice president of engineering Stinson to research vice president Payne calling his attention to an article in the June 3, 1968 issue of *Steel Magazine* reporting on the General Electric metalliding process and suggesting that the research department investigate. (Tr. 295-96) Payne was Dill's boss, and under his direction Dill wrote Arthur D. Little Company for information regarding that process [Def. Exh. 5] (Tr. 296-97) This letter, dated June 14, 1968 stated:

> "We are interested in the potentials that may be available through the use of the metalliding process which you have recently licensed from General Electric. The two areas of primary interest to us would be to obtain coatings on steel that would have wear resistence either to abrasive wear or as a bearing surface."

Dill then asked technical questions about the depth, time and temperature required for coating and diffusing, what experience had been obtained heat treating coated steel specimens, problems of cracking of the coating, and the maximum size piece that could be treated. (Tr. 298)

Def. Exh. 6 was the reply letter dated June 24, 1968 wherein Dill's questions were answered and he was told that it was boron that would produce a hard surface on steel.

Furthermore, the reply letter mentioned that a large number of people in government and industry were being sent an information letter. A license agreement from General Electric with a 2 percent royalty was described. (Tr. 299-300) Def. Exh. 8 is a letter written to Dill by Hughes Tool's Palmisano enclosing Def. Exh. 9, a report on boronizing of steel prepared by Magnetic Propulsion Systems, Inc. It was a detailed article describing ways of using boron to improve the hardness of steel and begins by describing that the first technical literature describing boronizing of steel appeared in 1895 and that much experimental work was done on the same in the 1920's and that books and articles were written in the 1960's and that there were many patents held on different boronizing processes. (Tr. 304-05). Def. Exh. 10 was a memo from Scales to Palmisano indicating that the research department had reviewed the article and that he would like to send Magnetic Propulsion Systems some specimens, have them treated and returned for evaluation. (Tr. 306)

Def. Exh. 20 was a report dated April 20, 1970. This article, written by Hughes Tool engineer Rising many months before Hurst even showed up in Houston, stated:

> "I believe that metallided surfaces can be used for bearing, hard surfacing and cutting structure applications. The properties of a metallided surface such as a high hardness, fatigue strength, and a low coefficient of friction could possibly improve our products. Metalliding might also provide these properties more cheaply than our present designs do."

The specific element being talked about in the metalliding process was boron. (Tr. 307-08)

It is not uncommon for a salesman or a vendor to drop off a sample of his product at Hughes Tool Company, or for

another company to mention processes or products and offer to treat Hughes Tool Company products. (Tr. 311-12) In many cases it takes a considerable amount of time to evaluate a product. In the instance of the cone treated by Hurst, Hughes Tool Company was not able to use a standard test specimen and it became necessary to prepare a specimen as a standard to make the comparison. (Tr. 312)

Def. Exh. 30 was the March 6, 1962 patent issued to Dr. Cook, who wrote the article that Hurst read in August 1969, and at column 9 it states:

> "Because the tough, adherent, corrosion resistant properties of the boride coatings are uniform over the entire treated area, the boride coated metal compositions prepared by my process have a wide variety of uses. They can be used to fabricate . . . gears, bearings, and other articles requiring hard, wear resistant surfaces. Other uses will be readily apparent to those skilled in the art, as well as other modifications and variations of the present invention in light of the above teachings." (Tr. 313-50)

Def. Exh. 31 was a 1967 article from the *Scientific American,* which describes the use of boron nitride as a way of putting a hard coating on steel implements. At page 93 of the article, one of the applications mentioned is for cutting tools. On page 94, it is stated:

> "For example, boron-coated iron is used to make knife sharpness bearings and dies." (Tr. 316)

Def. Exh. 32 is an article from *Metal Progress* entitled "How Caterpilla. Uses boron steels", and at p. 78 the author describes that boron steels are used in under carriage parts and in ground engaging tools, where the parts must withstand severe shock loading as well as abrasive wear. (Tr. 316) From these articles introduced and the patents by Dr. Cook, Mr. Dill was of the opinion that it was quite common

knowledge in major scientific and general interest publications that the use of boron as applied to steel would make it hard and more resistent. (Tr. 316-17).

Dill was asked to comment on the "technical geneology chart" introduced by Plaintiff and which attempted to trace Hurst's project in sort of a direct line down to the three patents used by Hughes Tool Company. Dill pointed out that it was very common for Hughes Tool files to reference other files when being opened and closed, because whenever they wanted to look at prior work in any particular area, it would be most doubtful if the work was researched in a summary or another report. It avoids having to go back to the files and start searching. The fact that a later file refers to an earlier file is no indication that the work done directly points the way to the later experimentation and research contained in the second file. The reference to the old file is strictly that, just a reference. (Tr. 317-18) During the noon recess, Dill looked at the three boxes of project files at counsel's office and found 17 project files relating to boronizing of bearing surfaces that were not even on plaintiff's "technical geneology chart". (Tr. 318-19) See Def. Exh. 48. The date of the oldest file was March 17, 1970, over 6 months before Hurst came to Hughes Tool. This was the file dealing with the test that Hughes Tool Company was requesting regarding boronizing of bearing surfaces. (Tr. 319)

On redirect examination, Dill pointed out that the earlier memos did not convince him that metalliding (a particular process for putting boron on steel) would be useful to Hughes Tool Company, but he denied that his response to the 1968 suggestions was that they were uninterested in *boriding*. (Tr. 322) Their primary interest in boronizing occurred after they produced the journal bearing bit. With respect to all the documents and proposals sent to them, they were principally

on boron. (Tr. 324; 335-36; Def. Exh. 10.) The Arthur D. Little proposal was turned down because they wanted Hughes to enter into a research program and in addition pay many other charges including royalties, which Hughes was not interested in because they did not like the metalliding process for putting boron on.

Plaintiff's counsel pressed Dill to obtain an answer from him that Hughes Tool didn't follow through with respect to any boronizing suggestion made to them in any of the early contacts, and Mr. Dill forthrightly stated this was not the fact and that all of the processes suggested to Hughes during the pre-1970 period of time were all metalliding (salt-bath) processes, which they did not care for. (Tr. 326-27)

With respect to the boronizing files that Plaintiff did not have on its exhibit summary chart, Dill pointed out that the 17 files he found would not "plug in on that chart" but would be off to the side and feed down into a line near the bottom left on the chart. (Tr. 330) Hughes Tool Company initiated a lot of work themselves well prior to the time that Hurst appeared and that Hughes work initially led down to these patents. (Tr. 331)

Stan Scales was the next witness; he is the chief metallurgist at Hughes Tool Company since 1975, and prior to that time was a staff engineer for 7 years. (Tr. 338) The tests requested by Hughes Tool in the early part of 1970 involved a series of tests which were to be used to evaluate a number of surface coatings, one of which happened to be boron. None of the tests on any boronized specimen done for Hughes Tool Company was actually run until after Hurst's drill cone had been received at Hughes. (Tr. 343-43) However, the first bearing tests were completed and he saw some results on them before he saw the results of the testing on the Hurst cone. (Tr. 343) Although the first data that

Hughes did on any boronized test piece treated at the request of Hughes and tested by Hughes was not received until November 11, 1970, Scales did see those specimens probably towards the end of September and he liked the appearance of the boronized specimens and the way they felt. They had the slick bearing feel that he was looking for. (Tr. 345) He does not recall seeing Exhibit 68, the laboratory report on the Hurst cone, prior to the date it was typed, being January 19, 1971. (Tr. 347)

By September 1, 1971 he filed an employee invention disclosure in regard to boronized wear surfaces and bearings; he had reached a point where they would be going to the field with some actual products to be tested. (Tr. 353) He denies that the Hurst testing influenced his decision to make the invention disclosure. (Tr. 355) Some discussion was had regarding the listing of the project file on the testing of the Hurst cone on lists of files considered with respect to patent applications, but Scales pointed out that on one list where that project file was scratched out he himself would have taken it out because it did not apply, since Hurst's project involved a steel tooth cone and the other files were tungsten carbide bits. (Tr. 361) Plaintiff's Exhibit 92 was a December 31, 1970 letter to a company patent attorney mentioning that they were testing different treatments, including a sulfide diffusion treatment and a boronizing treatment, pointing out that both were known arts but their use on rock bit parts could be considered novel with unexpected performance improvements, with respect to journal bearing pins for regular bits, for journal bearing pins for bits with inlaid cones, and for gage surfaces of cones. (Tr. 364) The last item was included with the other two because someone might have reminded him or told him that there was some interest in gage surfaces that were boronized. The

letter also pointed out that a boronized case was extremely hard, some time measuring as high as 2300 KHN, which is a Knoop hardness number. (Tr. 366) He already knew that in standard literature that a borided surface would have this high a number. (Tr. 367-68) If he had been referring to the Hurst tests at the time had he seen them, he would have used a reference as high as 2200, because that's what the test showed. (Tr. 369)

A journal bearing is a sliding bearing as opposed to a friction bearing (roller bearing). It is a sliding, cylindrical surface against another cylindrical surface of the cone, whereas a roller bearing is like the wheel bearing in an automobile. It is a very different type of bearing which must be lubricated at all times. (Tr. 378) In response to a question from the court, Scales pointed out that a journal bearing's advantage over a roller bearing is that the carbon-tooth cones (cutters) had been outlasting roller bearings that wear out because the mud got in. Journal bearings with O-ring seals outlasted the carbide cutting structures on the cones; this was really a revolutionary change in about 1970. In other words, the bits would be wearing out before their roller bearings; but journal bearings outlasted bits, which was the preferable combination. (Tr. 380)

The Court then asked what Hughes Tool now boronized, and Scales showed that they boronized the journal surface of the shaft upon which the cone sat, which was the inner bearing. When Hughes started to make larger bits, they had a lot of trouble with the hard-faced stellite alloy application on the journal bearing shafts and at the same time boronizing began to look good, so they began boronizing this surface instead of hard-facing it. (Tr. 382) The boronized surface has good antifriction properties; being slick, it slides against the cone surface very readily and it can be used at higher

speed and more weight without generating heat or galling. (Tr. 382-83) Scales was asked to explain the difference between the boronizing Hurst did on his drill bit and the boronizing that he did on the Hughes Tool cone. Scales explained that Hurst procured a finished roller-type cone and boronized it. That cone had already been carburized, hardened and tempered and the bearings had been ground. Hurst proceeded to boronize it and deliver it in that condition to Hughes. The boronizing had softened the hardening and tempering that had been originally performed. It was completly unuseful as received. In addition, the roller races were naturally somewhat distorted from the operation, and they would have to have been reground. But the boronizing is too hard to regrind; it was unfeasible. (Tr. 383-84)

Additionally, the Hurst cone had had hard facing on it which Hurst boronized over; Hughes later experimented and patented (but does not use) boronized teeth that are not hard-faced. Additionally, the bushing and button in the cone are different steels; the button is a high-speed steel that is given a special treatment, yet it was still in Hurst's cone as delivered. The Hurst cone in order to be tested had to be reheated to see if there was anything interesting. Just the cone had been left at Hughes Tool, and the entire thing had been boronized, inside and out. (Tr. 384-85)

Today Hughes Tool does not boronize any cutters; only the journal bearing pin is boronized. Scales pointed out that with a cutter and shaft, there are two bearing surfaces; the inside of the cutter [the one Hurst boronized], and the outer part of the journal pin upon which the cone (also called a cutter) sits. It is impractical to boronize the bearing surface of a cutter because you have to carburize, boronize, harden and temper the cutter. If you boronize and then harden and temper a cutter, the bearing surface will be tapered and out of round. Hughes would have to grind it and boronize the surface so hard that only diamond grinding could be used, and then they would remove the boronized case. Although it is impractical to boronize the surface of a hollow cone, Hughes has found it practical and feasible to boronize the journal bearing after it has been carburized and is sized or polished and then hardened and tempered. Because it is a relatively solid piece, Hughes does not get any distortion that needs grinding. It can be used as hardened and tempered. Experimentation was done with boronizing both surfaces, but the bushings could not be finished out and Hughes was never able to run a test like that. (Tr. 385-86) From a wear standpoint, because the cone rotates, it is better to have a hard material on the bearing pin to protect its pressure point

than on the cone, where soft silver inlays can be put (to help reduce friction). The entire inside surface of the cone is a wear surface, whereas the journal bearing has only one wear surface at its pressure point. (Tr. 387) For example, on a wagon wheel the axle should be the harder material; the bottom, fixed portion of the axle gets the most wear, while the turning portion of the wheel has its wear distributed around its circumference. (Tr. 387-88) Nothing that Hurst had left at Hughes Tool Company would ever cause Scales to think of boronizing the bearing pin. (Tr. 388)

Scales saw Hughes engineer Prince's January 19, 1971 report (Pl. Exh. 66), and as a metallurgist this report told him that the Hurst cone had been carburized, hardened and tempered but that its hardening and tempering had been destroyed by the boronizing treatment. It had cracking of the boronized case that extended into the carburized case (the layer over the steel). The Hurst cone had to be reheated to get the case and core hardened, otherwise, the teeth would have just cracked and bent in testing. The cone did not come into Hughes Tool Company heat treated, because they performed a hardness test on the sections from the cone before part of it was heat treated and then on the sections that were heat treated. Technical figures to support this are described. (Tr. 389-90)

Scales again explains why the Hurst cone, whether as received or even after being heat treated, would not have performed well. (Tr. 390-91) Later Hughes did do some testing of hard-faced boronized teeth and it was abandoned as non-usable. The hard-facing was so much more significant than the boronizing that the boronizing added nothing to the hard-facing application. (Hard-facing is the application of special hard metals to the drill-bit piece). Boron did put a certain hardness on steel on Hurst's cone,

and Prince's report showed this. But it was quite thin and for cutting structures they never had any luck with thin, hard surface applications. (Tr. 391) Whether or not a cutter would perform well in the field is not necessarily directly related to the hardness of the surface of the teeth. (Tr. 391-92)

The first test results did show that the Hurst specimen wore less in a certain period of time than the Hughes standard specimen, which was a stock specimen. But the only fair way to run the test is to take two standard specimens, have them hard faced by the same operator, heat treated together and then tested. Otherwise, you get into situations where the machining is slightly different, the hard facing thickness is different, and there is a different amount of puddling. You can get 50 percent difference in wear just by the hard-facing operator. Scales therefore recommended to Prince that additional testing be done. The next test used two standard gage cutter test specimens. (Tr. 394-96) One standard was boronized and one was not, but they found that in the test it made no difference. Both specimens performed identical. (Tr. 398)

Scales was shown Def. Exh. 10, his March 10 letter suggesting Hughes prepare and ship to Magnetic Propulsion Systems four test shafts that would be used to simulate the journal bearing portion of the head section of a drill bit, with the request that Magnetic Propulsion Systems boronize the eight bearing surfaces on the four shafts for about .004 to .005 of an inch depth. (Tr. 399-402) Scales was interested in boronizing because it was reported to have a high surface hardness, and Hughes had just recently introduced the journal bearing rock bit to the industry. (Tr. 402-03) Def. Exh. 16 was a letter from Palmisano to Fastner Licensing Associates, who was connected with the Magnetic Propul-

sion Systems Company, dated March 12, 1970, specifying the type and depth of boronizing needed on four test shafts. Def. Exh. 17 was a memo from Palmisano to Scales dated March 17, 1970, saying that the four shafts were going to be boronized. At that time, Scales set up a project number to evaluate various surface treatments for Hughes bearings. (Tr. 404-05)

Def. Exh. 18 is a memo from Scales to Hughes' J.C. Bonney dated March 17, 1970, which initiated project 46-12-06-01, the object of which was to evaluate surface treatments for steel journal bearing members. There followed an extensive outline of the work to be done, including two projects involving boronizing. (Tr. 407-08) Def. Exh. 19 is a letter dated April 3, 1970 giving specific boronizing directions for treatment of the journal bearing shafts. (Tr. 410) Magnetic Propulsion Systems terminated its laboratory testing operations before the four shafts could be boronized, and as reflected in Def. Exh. 23 (a letter from Scales to the Lindberg Corporation dated July 8, 1970) a request was made to the Lindberg Company to boronize the four shafts. (Tr. 411-13) The technical directions he set forth were obtained from earlier literature; experimentation over the years by other people had lead textbook writers to establish depth values for boronization, and these were well known. (Tr. 414-15) Def. Exh. 25 is Scales letter dated July 24, 1970 giving technical specifications for boronizing, and Def. Exh. 26 are various invoices and vouchers for Lindberg's boronizing work, showing that the test samples were received back by Hughes Tool Company on September 23, 1970. (Tr. 414-16)

Scales was shown Pl. Exh. 81, the U.S. patent for boronizing of drill bit cutters. The witness described in great detail the difference between Hurst's method and type of

boronizing of drill bits and that employed by Hughes. The patent specifically describes the pack method of boronizing, the elimination of hard facing on the drill bit teeth, and so on. Scales just did not patent the boronizing of drill bit cutters, and the patent does not exclude other people from boronizing drill bit cutters. (Tr. 417-19) It describes a specific method. This patent has never been commercially used by Hughes Tool Company. (Tr. 420)

Pl. Exh. 80 was the patent on wear resistant boronized surfaces and boronizing methods covering the carburizing, boronizing, hardening and tempering of a journal bearing pin. It has nothing to do with cutters. (Tr. 420-21) The boronizing is done with the cup and powder method (pack method). This patent is directly related back to the project that Scales set up in March of 1970, because when the shafts were sent to Lindberg for treatment they used the powder method. Scales could see that the powder-pack method fit much better into Hughes processing than the salt method did. (Tr. 422) Pl. Exh. 82 is the patent for boronizing of a journal bearing pin or any other bearing surface using a technique whereby it is carburized, polished, then quenched and tempered. This is like the process described in Exhibit 80, with the extra step added of polishing. (Tr. 423) Working and deriving what ultimately turned out to be the patents marked as Pl. Exhs. 80 and 82, being for the bearing shaft and for the finishing of that shaft, Hurst's cone and the testing on it taught him nothing. (Tr. 423)

Scales was asked if he was interested in the bushing in the Hurst cone, but he said no because Hughes already had a good bushing. (Tr. 434-35) Plaintiff's counsel asked if boronizing the bushing, which had a little bearing surface, gave the same type of experience to learn from as if someone had boronized the journal bearing bit. Scales responded that

they had had no problems with wear in the nose bushing because it doesn't carry a great deal of load; most of the load is carried on the larger journal shaft and that is the surface that he did his research on. (Tr. 435)

There was no reason to contact Hurst to try and obtain whatever benefit, if any, that might come from the knowledge he had accumulated in boronizing a Hughes Tool Company cone, because Scales wanted a method of boronizing that would be acceptable to Hughes Shop procedures and they knew that Hurst's process included the salt bath, which was dangerous. (Tr. 438)

Plaintiff's damages expert was Neal J. Mosely, a patent attorney who had worked for a number of corporate employers, the last being Reed Tool Company of Houston, before going into private practice on his own. (Tr. 442-43) He was asked to investigate the proper measure of damages in a trade secret case. In doing so, he read a substantial number of law cases, a number of survey articles discussing the problems of licensing and damages and the like, had talked to other attorneys and to some engineers. He also drew somewhat on his own experience. (Tr. 444-45) Based upon the assumption that a trade secret was brought into Hughes Tool Company in September of 1970 and that Hughes Tool Company decided to use that trade secret, a "reasonable royalty" would be the applicable measure of damages and that such would cover a range of 5 to 10 percent based on the Hughes Tool Company's sales. (Tr. 445-48)

On cross-examination, Mosely stated that he had worked for Reed a little over two years and during that time had only negotiated all the way to completion three royalty contracts. One was 7 1/2 percent, and one was 5 percent, and one was 2 percent. (Tr. 449-50) If the invention does not offer a real improvement in performance and no advantages in terms of

being more attractive to the customer, but the only thing was a savings in cost to Hughes Tool Company, then a royalty would be calculated as a percentage of the cost savings. (Tr. 463) However, his knowledge on what would be the appropriate royalty as a percentage of a cost savings comes not from any personal knowledge or experience that he has had, but merely from reading survey articles and from court decisions. (Tr. 467)

Mosely represented Reed Tool Company when Hurst sued Reed, and Mosely reached an agreement by which Hurst agreed to pay a 5 percent royalty to Reed. (Tr. 477) Def. Exh. 51 is a copy of the Reed patent that Hurst took a license under. It involved a patented, boronized bushing that fit in a rock bit; the royalty rate was not based upon the whole rock but just on the small bushing in it. (Tr. 481) Mosely admitted that the fact that a trade secret buyer had the same idea would certainly affect the royalty rate. (Tr. 484) Also, ordinarily a person that is a supplier would not be considered as a person trying to sell anything except materials. (Tr. 485)

Robert A. Felsman was then called by the Plaintiff. He acted as the patent attorney for Hughes Tool Company in 1973. (Tr. 487) Pl. Exh. 71, the memo from Clyde Dill to E.M. Galle, was prepared at his direction because the company wanted his advice as to whether or not it could commercialize boron treated products without liability to Hurst. He asked the company to find out more facts about what happened when Hurst came to Hughes Tool Company. He advised the company to have Dill put the recollection of the visit down so that he could form an opinion. (Tr. 487-88)

Felsman's opinion given to the Hughes Tool Company management was that if a person comes to a company as a salesman and does not require any confidential or secret

agreement with respect to his invention, then he waives his right to his invention, or his trade secret. (Tr. 501) It was also his opinion that Hughes already had the "secret" and that it didn't make any difference whether Hurst had contacted them once or a hundred times; Hughes had no liability. (Tr. 503)

On cross-examination, Mr. Felsman pointed out that when investigating the files forming the history of the Hughes Tool Company leading to the boronizing patents, he saw the project file started by Stan Scales on March 17, 1970. (Def. Exh. 18) With respect to the hand-written list of projects found in the files, there was more than one file crossed off and some dates were also crossed off. He does not know the reason, it is just a work sheet. (Tr. 505)

Mr. Felsman has examined the three patents involved in this lawsuit (Exhibits 80-82), and the conclusion he draws is that they do not prevent Hurst from doing the same sort of boronizing of cutters that he did in the past. (Tr. 505-06) Felsman gives his reasons for that opinion. (Tr. 506-08)

In large companies such as Hughes Tool, a salesman brings by samples for people to try all the time. It's understood that if the company wants to use it, it will contact the salesman who will then sell products to Hughes. But the company does not accept responsibility for contacting all the salesmen who bring something by for them to look at. (Tr. 508)

His opinion was that Hughes Tool Company did not have any liability to Hurst because the records clearly showed that Hughes had the idea prior to the time Hurst showed up. Also, the records show that the cone in the condition that Mr. Hurst brought them was not used by Hughes Tool Company and has not been used by Hughes. (Tr. 509)

Plaintiff then rested. Defendant moved for an instructed

verdict. In granting that motion, the Court pointed out that all Hurst was trying to sell was the idea that boron would work on drilling tools. He brought in a bit that he had borided inside and out. The fact that boron would make metals harder was well known and Hughes had already started its own investigation on the subject in the early part of 1970. (Tr. 532) Hurst did not have anything new or novel or any trade secret.

Secondly, and an even greater barrier than the first, was that Hurst simply went into Hughes Tool Company and gave them his bit and told them to look at it. Hurst didn't say "I'm giving it to you confidentially." Hurst gave them a carte blanche and then Hughes takes it and starts testing it. What are they supposed to do? Throw it in the trash can? Hurst simply asked Hughes to do anything they wanted to and he didn't care. It was only after he came back, if he came back the second time, that he said "if you use this I want to work something out with you." (Tr. 533) Furthermore, Hurst went over to Reed Tool Company and tells them the same thing, and the other people he contacted were acquainted with his idea and results, and yet there is no showing that they were under any confidential relationship. Had Hughes paid him something at the time for it, other people could have been using it. (Tr. 534) There was no confidential relationship at the initial contact, and that's when Hughes started to take action. Hughes is entitled to some protection too. Somebody comes and gives you something, then Hughes has the right to proceed like they want to. (Tr. 534-35)

Moreover, Hughes is not using any of the so-called alleged trade secrets that Hurst gave them. The only article being sold now using boron is on the journal gear; but Hurst gave them only a boronized bit (cone). They don't use it for any of

the purposes for which Hurst suggested they use it. (Tr. 535)

Also, the Plaintiff's evidence on royalities was not adequate to support a finding that Hurst would be entitled to a royalty on the sales of the bits that were boronized. Perhaps the only thing he could have been entitled to was his out-of-pocket expenses. (Tr. 536)

The Court pointed out that the whole case leads you to the conclusion that Hurst was a salesman, saying "this is what we're selling, if you are interested let me know. I can prove to you that it's a good product if you need to know it." (Tr. 538)